Summary of Fishery Surveys
Sackett Lake, Taylor County, 2013

WDNR's Fisheries Management Team from Park Falls completed fyke netting and electrofishing surveys in 2013 to assess the status of important fish populations in Sackett Lake. Fyke nets set shortly after the unusually late spring thaw targeted walleye, northern pike, and yellow perch. An electrofishing survey on June 10, 2013 documented the abundance and size structure of largemouth bass and bluegill populations, and fyke netting in mid-October yielded useful information on black crappie. Quality, preferred, and memorable sizes referenced in this summary are based on standard proportions of world record lengths developed for each species by the American Fisheries Society. "Keeper size" is based on known angler behavior.

Survey Effort

On May 13, 2013 we set 4 fyke nets at locations chosen to intercept early spring spawners and fished them overnight for two nights when water temperature was 55°F. Comparing measured water temperature with the optimal spawning temperature range of the target species, our spring fyke netting probably occurred after the peak spawning activity of pike, perch, and walleye. With water temperatures at 68-72°F, our early June electrofishing survey was well-timed to represent the relative abundance and size structure of largemouth bass and bluegill populations during their spawning activities. We sampled the entire shoreline (1.90 miles) in 0.92 hour, including 1 mile sub-sampled for panfish in 0.50 hour. In our October 14-16 fyke netting survey we replicated the netting effort and net locations of our spring netting survey.

Habitat Characteristics

Sackett Lake is a 63-acre seepage lake located about 11 miles northwest of Medford, WI. The average depth is 15 feet, and maximum depth is 32 feet. The water is moderately clear with a medium-brown color (secchi depth = 4 feet). The substrate is comprised of 30% sand, 20% gravel, 5% rock, and 45% muck, supporting a moderate density of submergent and emergent vegetation. An intermittent stream discharges from the northeast corner of Sackett Lake to Grassy Knoll Lake. The shoreline vegetation is 80% upland hardwood, 15% upland conifer, and 5% swamp conifer. Taylor County maintains a boat landing, a swimming beach, and a picnic area on the northeast shore. A municipal ordinance prohibits the use of gas-powered motorboats. Sixteen log cribs were installed in 1968, and 18 were added in 2001.

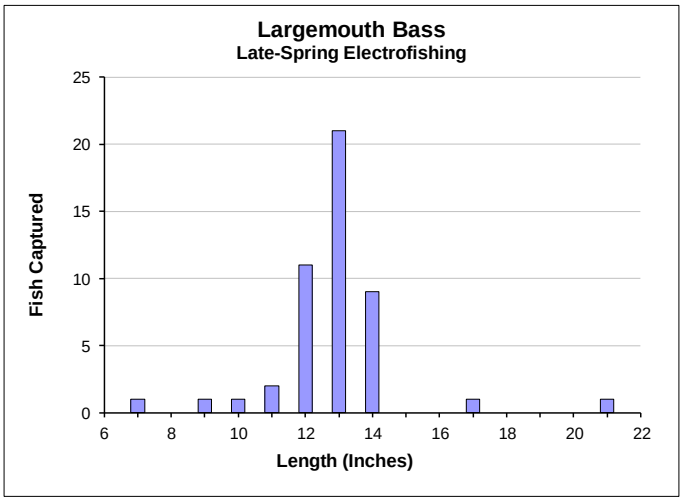
Summary of Results

We captured eleven fish species in our netting and electrofishing surveys. Largemouth bass and bluegill were the principle predator and prey. White suckers and golden shiners complemented the forage base. Yellow perch were absent in both netting surveys and scarce in our electrofishing survey, and all perch captured were less than 5 inches long. Bullhead anglers can find plenty of preferred-size fish in Sackett Lake; a fifth of the yellow bullheads in spring fyke nets were 12 – 13½ inches long.

Largemouth Bass

Late Spring Electrofishing

Captured 25 per mile or 51 per hour ≥ 8"	
Quality Size ≥ 12"	91%
Preferred Size ≥ 15"	4%
Memorable Size ≥ 20"	2%

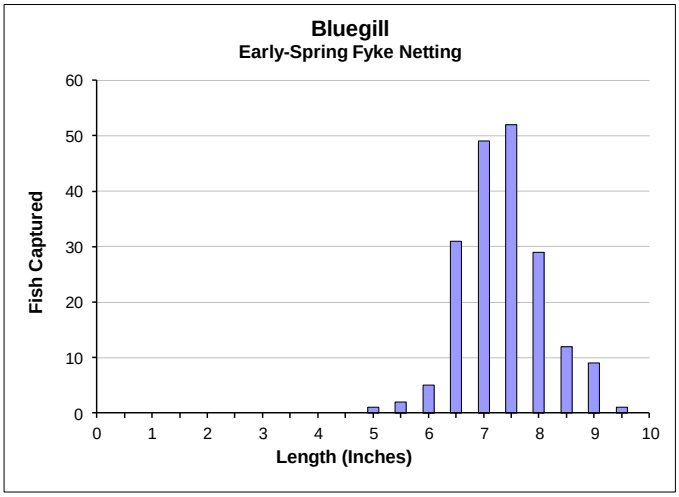


The late spring electrofishing survey revealed a largemouth bass population in moderately high abundance with few preferred-size fish. Though we did not analyze their ages, we suspect that slow-growing bass suffer high mortality, either from angling or natural causes, once they reach legal size (14 inches). Catch-and-release anglers should enjoy fast fishing action for intermediate-size bass along with the prospect of catching one of the rare individuals that grow to memorable size.

Bluegill

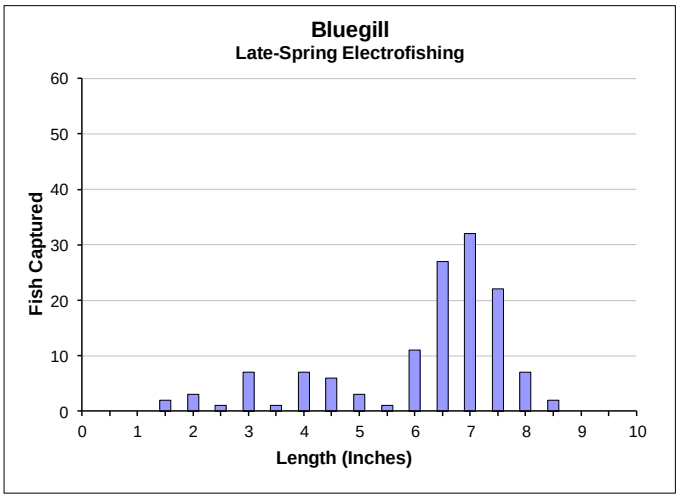
Early Spring Fyke Nets

Captured 24 per net-night ≥ 3"	
Quality Size ≥ 6"	98%
Keeper Size ≥ 7"	80%
Preferred Size ≥ 8"	27%



Late Spring Electrofishing

Captured 126 per mile or 252 per hour ≥ 3"	
Quality Size ≥ 6"	80%
Keeper Size ≥ 7"	50%
Preferred Size ≥ 8"	7%

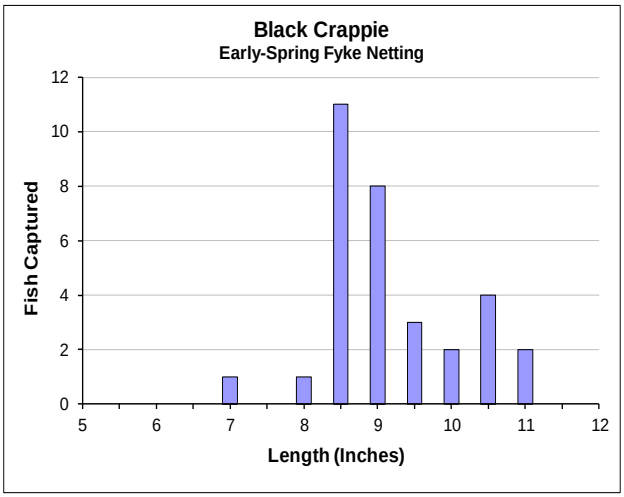


The moderate capture rate and satisfactory length distribution of bluegills in our late spring electrofishing survey suggest that largemouth bass and walleye eat enough young bluegills to maintain moderate abundance and satisfactory size structure in the bluegill population. Proportions of keeper- and preferred-size bluegills in early spring fyke nets exceeded those recorded in 2010 (55% and 19%, respectively) in nearby Chequamegon Waters Flowage, a 2714-acre impoundment that receives high angling pressure directed toward panfish.

Black Crappie

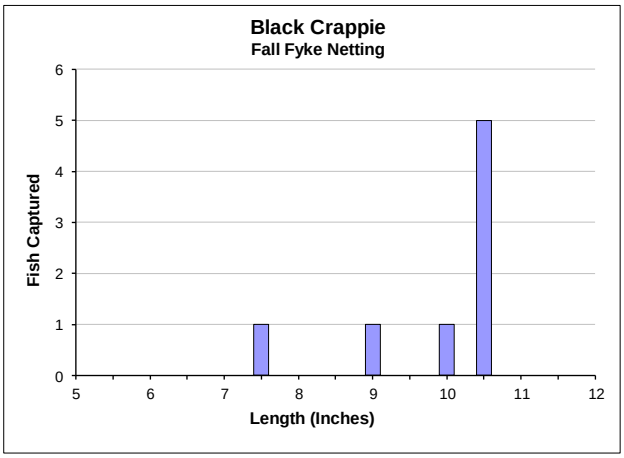
Early Spring Fyke Nets

Captured 4.0 per net-night ≥ 5"	
Quality Size ≥ 8"	97%
Preferred Size ≥ 10"	25%
Memorable Size ≥ 12"	0%



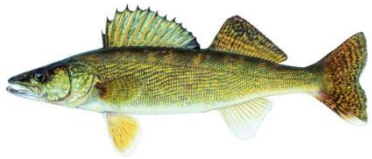
Fall Fyke Nets

Captured 1.0 per net-night ≥ 5"	
Quality Size ≥ 8"	88%
Preferred Size ≥ 10"	75%
Memorable Size ≥ 12"	0%



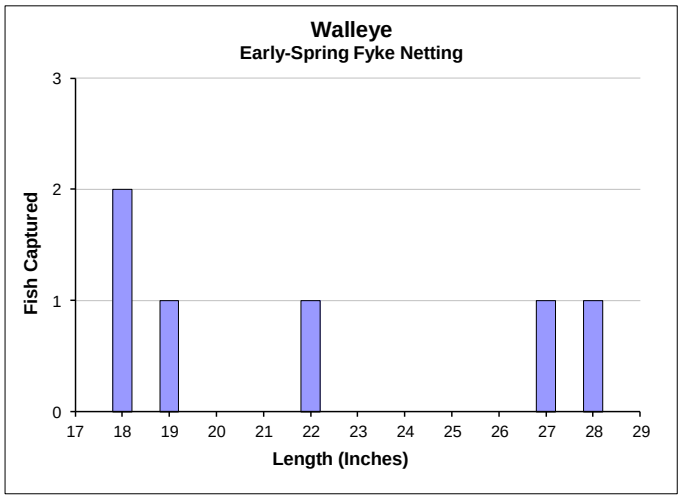
Our low capture rates of black crappies in both spring and fall fyke nets point toward low population abundance. We cannot confidently assess size structure because our sample in fall nets was small and because spring nets can disproportionately represent the larger, mature crappies that are staging to spawn. Nonetheless, the strong year class that was 8 – 9 inches long in spring gained about two inches during the 2013 growing season. Anglers should enjoy a temporary increase in the proportion of preferred-size crappies for one or two years. However, younger crappies were poorly represented in our samples, suggesting that recruitment to the adult population is sporadic.

Walleye



Early Spring Fyke Nets

Captured 0.8 per net-night ≥ 10"	
Quality Size ≥ 15"	100%
Preferred Size ≥ 20"	50%
Memorable Size ≥ 25"	33%

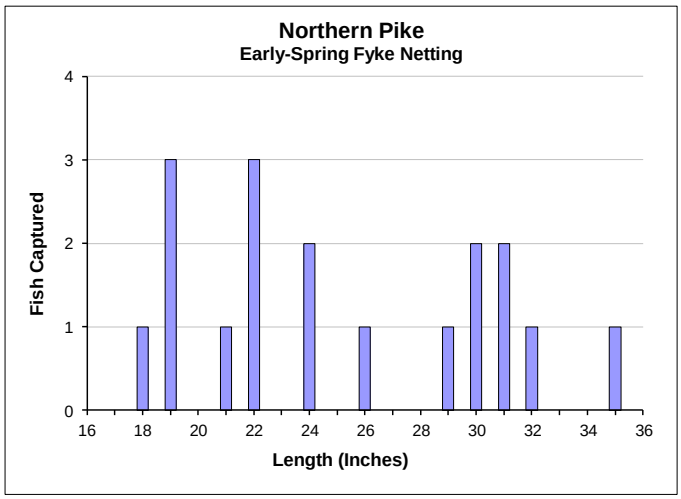


At one-fifth that recorded in April 1995, our capture rate of walleyes in early spring 2013 fyke nets reflects the low adult density typically observed in populations maintained primarily by stocking. Small fingerlings (1 – 3 inches) planted intermittently for many years and large fingerlings (6 – 7 inches) stocked annually since 2011 survive at low rates, offering bonus angling opportunity for memorable-size walleyes while complementing the predatory pressure of largemouth bass to effectively control panfish abundance. Poor reproductive success in the walleye population is not due to a lack of spawning habitat; suitable substrate covers half the lakebed. Instead, we suspect that predation and competition from abundant largemouth bass control the survival of young walleye. Currently, only walleyes less than 14 inches may be kept, except one may be longer than 18 inches. With little or no in-lake production of new recruits to the adult population, the slot limit on walleye is inappropriate, and a proposal to restore the statewide 15-inch minimum length limit is in review.

Northern Pike

Early Spring Fyke Nets

Captured 2.5 per net-night ≥ 14"	
Quality Size ≥ 21"	78%
Preferred Size ≥ 28"	39%
Memorable Size ≥ 34"	6%



Northern pike in several age classes were captured at a low rate in spring 2013 fyke nets, suggesting that a low-density pike population has become well established in Sackett Lake since the species was first documented there in 1995—forty-one years following the only authorized pike stocking event (13,600 fry). In low abundance pike can avoid competition and grow quickly to preferred and memorable sizes. Compared with many waters where small pike in high abundance are often considered a nuisance, anglers can expect slower-than-average catch rates and better-than-average size structure from Sackett Lake's pike population.

Survey Data Collected and Analyzed By: Jeff Scheirer, Kendal Patrie, and Greg Rublee
Report By: Chad Leanna (LTE Fish Tech) and Jeff Scheirer (Fisheries Biologist), Park Falls, 1-7-14
Edited and Approved By: Dave Neuswanger, Fisheries Supervisor, Hayward Field Unit, 1-8-14